

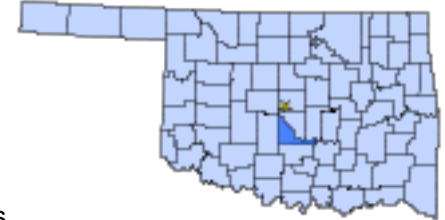


A Place of Refuge in Newcastle

Full Mitigation Best Practice Story

McClain County, Oklahoma

Newcastle, OK - After winds in excess of 250 miles per hour bristled through central Oklahoma on May 3, 1999, citizens and business owners were left to contend with \$1.5 billion in damages. Per statistics from the National Weather Service, the destruction included 1,780 homes, 85 businesses, three churches, and two schools. Tragically, 85 people lost their lives after the tornadoes touched down in Oklahoma and two other States. Building Assessment Performance teams from the Federal Emergency Management Agency (FEMA) determined that only specifically designed tornado shelters would have saved lives. One community located in the middle of the destruction, the City of Newcastle, built such a shelter.



After reviewing locations, the city chose a lot next to both the police station and a school. "Placing the shelter near the city's middle school comforts students, teachers, and parents during severe weather," said City Manager Nick Nazar. "It's a great short-term shelter."

The city contracted an architectural firm to design a facility that conformed to specifications published in FEMA 361, Design and Construction Guidance for Community Shelters. Construction began in Spring 2003 and ended three years later. The first student drill occurred soon after the start of the Fall 2006 school year. Within five minutes of the drill, 850 people exited the elementary and middle schools and settled in the shelter.

Providing secure shelter for 850 people more than justified its construction cost of \$601,600. The city partnered with FEMA's Hazard Mitigation Grant Program (HMGP) and the Oklahoma Department of Emergency Management (OEM) to build the shelter. Through HGMP, FEMA provided \$451,200 for the 6,500 square-foot facility, and the City of Newcastle contributed \$150,400. The steel-reinforced building temporarily shelters 1,063 people and has a generator to operate all building services, switching on automatically when the facility loses power.

Community members have used the building as a cooling shelter during hot periods and for warmth during winter storms. It also provides temporary protection for Newcastle's mobile home park residents. Nazar mentioned that during the severe flooding of 2007, one family lived in it as temporary housing. Safe exiting from the shelter is assisted by triple-hinged doors that open inward, facilitating exit despite fallen debris. An entrance sign advises residents how to access the building when severe weather threatens.

"When severe weather threatens, individuals and families need to have a safe place to go and time to get there," Nazar said. "Residents can easily and quickly reach this facility, and its success has led to including safe room construction in other local schools."

Activity/Project Location

Geographical Area: **Single County in a State**

FEMA Region: **Region VI**

State: **Oklahoma**

County: **McClain County**

City/Community: **Newcastle**

Key Activity/Project Information

Sector: **Public**
Hazard Type: **Tornado**
Activity/Project Type: **Safe Rooms/Community Shelters**
Structure Type: **Concrete, Reinforced**
Activity/Project Start Date: **03/2003**
Activity/Project End Date: **03/2006**
Funding Source: **Hazard Mitigation Grant Program (HMGP)**
Funding Recipient: **Local Government**
Funding Recipient Name: **CITY OF NEWCASTLE**
Application/Project Number: **1355-140-R**

Activity/Project Economic Analysis

Cost: **\$601,600.00 (Actual)**

Activity/Project Disaster Information

Mitigation Resulted From Federal
Disaster? **Yes**
Federal Disaster #: **1355 , 01/05/2001**
Federal Disaster Year: **2001**
Value Tested By Disaster? **No**
Repetitive Loss Property? **No**

Reference URLs

Reference URL 1: <http://www.fema.gov/plan/prevent/saferoom/index.shtm>
Reference URL 2: <http://www.fema.gov/plan/prevent/saferoom/fema361.shtm>

Main Points

- Building Assessment Performance teams from the Federal Emergency Management Agency (FEMA) determined only specifically designed tornado shelters would have saved lives when 318 mile-per-hour winds bristled through central Oklahoma May 3, 1999.
- Newcastle built such a shelter in a lot next to both the police station and a school.
- Newcastle contracted with an architectural firm to design a facility that conformed to FEMA-361 wind-resistant community shelter specifications. Construction began in Spring 2003 and ended three years later.
- Providing secure shelter for 850 people more than justified the city's \$601,600 construction cost. Newcastle partnered with FEMA's Hazard Mitigation Grant Program (HMGP) and Oklahoma Emergency Management.
- People have also used the building as a cooling shelter during hot periods and for warmth during winter storms.
- It provides temporary protection for Newcastle's mobile home park residents.
- During the severe flooding of 2007, one family lived in it as temporary housing.
- When severe weather threatens, individuals and families have a safe place to go and time to get there.
- Residents can easily and quickly reach this facility, and its success has lead to including safe room construction in other local schools.



Entrance of the Newcastle safe room.



Inside the Newcastle safe room.